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WHAT IS CLAIMED IS:

1.   A system for reducing data volume transferred over a wireless communications network, comprising:

a browser operable to communicate a header sequence with a request to a network interface;

the network interface operable to receive the header sequence from the browser, the network interface operable to generate a signature for the header sequence, the network interface operable to store the sequence and signature in memory, the network interface operable to associate the sequence and signature with the browser, the network interface operable to communicate a cache header and the signature to the browser, network interface operable to communicate at least one request header of the header sequence to a server;

the browser, upon sending a subsequent communication, communicates the cache header and the signature to the network interface, in place of the header sequence.

2.   The system of Claim 1, wherein the sequence comprises request header information and a cache header to utilize header compression.

3.   The system of Claim 2, wherein the sequence further comprises at least one Hypertext Transfer Protocol (HTTP) request header and a cache header to utilize HTTP header compression.

4.   The system of Claim 1, wherein the browser is operable to store the sequence and signature in memory.

5.   The system of Claim 1, wherein the network interface is operable to associate the sequence and signature with an Internet Protocol (IP) address for the browser.

6.   The system of Claim 1, wherein the network interface is operable to communicate the at least one request header to a server over an IP network.

7.   The system of Claim 1, wherein the network interface is operable to receive a response from the server and determine whether the network interface has stored a sequence and signature in memory associated with the browser.

8. The system of Claim 7, wherein the network interface, upon determining that there is a sequence and signature stored in memory and associated with the browser, is operable to replace the head sequence received from the server with the cache header and signature, the network interface operable to communicate the cache header, signature, and response to the browser.

9. The system of Claim 8, wherein the browser, upon receiving the cache header, signature, and response from the network interface, is operable to store the cache header and signature in memory if the browser has not already done so.

10. The system of Claim 1, wherein the browser, upon initiating a communication when the browser has previously stored the cache header and signature in memory, communicates the cache header and signature to the network interface.

11. The system of Claim 10, wherein the network interface, upon receiving the cache header and signature from the browser, determines if the cache header and signature are stored in memory and are associated with the IP address of the browser, generates the at least one request header if the cache header and signature match the cache header and signature stored in memory, and communicates at least one request header to the server over the IP network.

12. The system of Claim 11, wherein the network interface, upon receiving a response from the server, replaces at least one request header received from the server with the cache header and signature and communicates the cache header, signature, and response to the browser.

13. The system of Claim 9, wherein the browser, upon receiving the cache header, signature, and response from the network interface, compares the cache header and signature against the cache header and signature stored in memory and deletes the cache header and signature stored in memory if it does not match the cache header and signature received from the network interface.

14. The system of Claim 10, wherein the network interface, upon receiving the cache header and signature but unable to locate a cache header and signature stored in memory associated with the IP address of the browser, generates an error message and communicates the error message and cache header to the browser.

15. The system of Claim 14, wherein the error message is a HTTP Error 406 ("Not Acceptable" or "Not Acknowledged").

16. The system of Claim 14, wherein the browser, upon receiving the error message and cache header from the network interface, communicates the header sequence to the network interface to re-establish the cache header and signature stored in network interface memory.

17. A device for reducing data volume transferred over a wireless communications network, comprising:

a network interface operable to receive a header sequence from a browser, the network interface operable to generate a signature for the header sequence, the network interface operable to store the sequence and signature in memory, the network interface operable to associate the header sequence and signature with the browser, the network interface operable to communicate a cache header and the signature to the browser, the network interface operable to communicate at least one request header to a server over an IP network.

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18. The device of Claim 17, wherein the network interface is operable to receive a header sequence comprised of header information and a cache header to utilize header compression.

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19. The device of Claim 18, wherein the network interface is further operable to receive a header sequence further comprised of at least one Hypertext Transfer Protocol (HTTP) request header and a cache header to utilize HTTP header compression.

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20. The device of Claim 17, wherein the network interface associates the header sequence and signature with an Internet Protocol (IP) address for the browser.

21. A method for reducing data volume transferred over a wireless communications network, comprising:

receiving a header sequence from a browser;

generating a signature for the header sequence;

5   storing the header sequence and signature in memory;

associating the header sequence and signature with the browser;

communicating a cache header and the signature to the browser; and

10   communicating at least one request header of the header sequence to a server.

22. The method of Claim 21, wherein the header sequence comprises header information and a cache header to utilize header compression.

23. The method of Claim 22, wherein the header sequence further comprises at least one Hypertext Transfer Protocol (HTTP) request header and a cache header to utilize HTTP header compression.

24. The method of Claim 21, wherein the network interface associates the header sequence and signature with an Internet Protocol (IP) address for the browser.

25. The method of Claim 21, further comprising:
receiving a response from the server and determining whether the network interface has stored a header sequence and signature in memory associated with the browser.

26. The method of Claim 25, further comprising:
upon determining that there is a header sequence and signature stored in memory and associated with the browser, replacing at least one request header received in the response from the server with the cache header and signature, and communicating the cache header, signature, and response to the browser.

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27. A system for reducing data volume transferred over a wireless communications network, comprising:

means for receiving a header sequence from a browser;

5   means for generating a signature for the header sequence;

means for storing the header sequence and signature in memory;

means for associating the header sequence and 10   signature with the browser;

means for communicating a cache header and the signature to the browser; and

means for communicating at least one request header of the header sequence to a server.

28. The system of Claim 27, further comprising:

means for receiving a response from the server;

means for determining whether the network interface has stored a header sequence and signature in memory associated with the browser; and

upon determining that there is a header sequence and signature stored in memory and associated with the browser, means for replacing at least one request header received in the response from the server with the cache header and signature, and means for communicating the cache header, signature, and response to the browser.

29. Header compression software embodied in a computer-readable medium and operable to:

receive a header sequence from a browser;

generate a signature for the header sequence;

5   store the header sequence and signature in memory;

associate the header sequence and signature with the browser;

communicate a cache header and the signature to the browser; and

10   communicate at least one request header to a server.

30. The software of Claim 29, further comprising associating the header sequence and signature with an Internet Protocol (IP) address for the browser.

5   31. The software of Claim 30, further comprising:

receiving a response from the server and determining whether the network interface has stored a header sequence and signature in memory associated with the browser.

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32. The software of Claim 31, further comprising:

upon determining that there is a header sequence and signature stored in memory and associated with the browser, replacing at least one request header received

15   in the response from the server with the cache header and signature, and communicating the cache header, signature, and response to the browser.